

We Claim:

1. A circuit-switching network for routing circuit-switched connections carrying data traffic to on-line data services from an originating central office to a terminating central office comprising:

5 a database in communication with the originating central office to provide information identifying circuit-switched connections carrying data traffic to on-line data services;

10 a plurality of interoffice data trunks between the originating central office and the terminating central office that carry circuit-switched connections to on-line data services; and

a circuit-switch at the terminating central office for providing access to on-line data services from the originating central office, wherein circuit-switched connections identified by the database are routed over the plurality of interoffice data trunks to the circuit-switch providing access to the on-line data services.

15 2. The system of claim 1 wherein the database provides information identifying circuit-switched connections carrying data traffic in response to an advanced intelligent network query.

20 3. The system of claim 1 wherein the database further comprises a routing table for identifying interoffice data trunks between the originating central office and the terminating central office.

25 4. The system of claim 3 wherein the routing table comprises telephone numbers associated with dial-up access lines to on-line data services.

5. The system of claim 1 wherein the circuit-switch consolidates trunk access to on-line data services from throughout a LATA.

6. The system of claim 5 wherein the circuit-switch trunk access to the on-line data service comprises a primary rate interface.

7. The system of claim 5 wherein the circuit-switch trunk access to the on-line data service comprises a T1/DS1 line.

8. The system of claim 1 wherein the interoffice data trunk comprises a T1 trunk line.

9. The system of claim 1 wherein the interoffice data trunk carries only calls to on-line data services.

10. The system of claim 1 wherein the circuit-switch for providing access to the on-line data services is a circuit-switch that is not in the normal terminating office for the voice telephone numbers to the on-line data service.

11. A method of routing circuit-switched connections carrying data traffic from an originating central office to a terminating central office with a circuit-switch providing access to on-line data services to relieve congestion caused by circuit-switched connections carrying data to on-line data services comprising the steps of:

identifying at the originating central office circuit-switched connections for accessing the on-line data services;

identifying an interoffice data trunk route to establish the circuit-switched connections for accessing on-line data services;

establishing a circuit-switched connection for the calls identified for accessing on-line data services over the interoffice data trunk to the terminating central office circuit-switch providing access to on-line data services.

12. The method of claim 11 wherein the circuit-switched connection is a telephone call.

13. The method of claim 11 wherein the step of identifying a circuit-switched connection is performed by identifying whether a dialed telephone number is associated with a dial-up access line to a data service.

14. The method of claim 11 wherein the step of identifying a circuit-switched connection is an advanced intelligent network function.

15. The method of claim 11 wherein the step of identifying an interoffice data trunk route comprises accessing a database comprising a plurality of telephone numbers proving dial-up access to a data service and a plurality of point codes identifying originating offices.

16. The method of claim 15 further comprising the step of:
determining from the database the interoffice data trunk route carrying circuit-switched connections to the terminating central office for connection to the on-line data service in accordance with the plurality of telephone numbers proving dial-up access and the plurality of point codes identifying originating central offices.

17. The method of claim 16 wherein the determining step indexes the telephone number proving dial-up access and the point codes identifying originating offices in a routing table to determine the interoffice data trunk route.

Fig. 2 18. A database for routing circuit-switched connections carrying data traffic to on-line data services from an originating central office to a terminating central office consolidating access to on-line data services, the database comprising:

a routing table comprising a plurality of telephone numbers associated with dial-up access lines to on-line data services, a plurality of originating central offices, and a plurality of trunk routes to the terminating central office consolidating access to on-line data services; and

service logic to determine the trunk route in accordance with the routing table, wherein the service logic indexes the telephone number with the originating central office to determine the trunk route.

5 19. The database of claim 18 wherein the routing table identifies the plurality of originating central offices by a point code.

10 20. The database of claim 18 wherein the routing table identifies the plurality of trunk routes by a trunk index.

21. The database of claim 18 wherein the routing table identifies the telephone numbers associated with dial-up access lines to on-line data services by a ten-digit NPA-NXX-XXXX.

15 22. The database of claim 18 wherein the service logic determines the trunk route by identifying a trunk index.

23. The database of claim 18 wherein the service logic determines the trunk route by identifying a ten-digit NPA-NXX-XXXX telephone number, wherein the ten-digit NPA-NXX-XXXX telephone number is associated with the trunk route to the terminating central office.

24. A circuit-switching network for routing circuit-switched connections carrying data traffic to on-line data services from an originating central office to a terminating central office comprising:

25 a plurality of interoffice data trunks between the originating central office and the terminating central office that carry circuit-switched connections to on-line data services;

30 a database in communication with the originating central office to provide information identifying circuit-switched connections carrying data traffic to on-line data services, the database further comprising:

a routing table comprising a plurality of telephone numbers associated with dial-up access to the on-line data services, a plurality of point codes identifying originating central offices, and a plurality of trunk indexes identifying trunk routes to the terminating central office; and

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service logic to determine the trunk route in accordance with the routing table, wherein the service logic indexes the telephone numbers associated with dial-up access to the on-line data services with the point code identifying originating central office to determine the trunk route; and

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a circuit-switch at the terminating central office for providing access to on-line data services from the originating central office, wherein circuit-switched connections identified by the database are routed over the interoffice data trunk to the circuit-switch providing access to the on-line data services.